AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

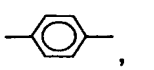
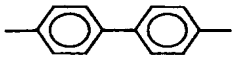
1. (Currently Amended) A photosensitive metal nanoparticle prepared by (i) forming a self-assembled monolayer of a thiol or isocyanide compound with a terminal reactive group, represented by Formula 1, on the surface of the metal nanoparticle, and then (ii) introducing a photosensitive group through ~~the~~ a reaction with the terminal reactive group to the monolayer:

Formula 1

$X\text{-}R\text{-}(A)_a$

wherein X- is HS- or NC-; R is a polyvalent organic group of 2-50 carbon atoms; A is -OH, -COOH, -COCl or $-NH_2$; and a is an integer of 1-4.

2. (Original) The metal nanoparticle of Claim 1, wherein the metal nanoparticle comprises gold, silver, copper, palladium, or platinum;

R of Formula 1 is polyvalent organic group of 2-50 carbon atoms, that can include -CONH-,  ,  , -COO-, -Si-, bis-(porphyrin) and/or -CO- in its carbon chain;

the photosensitive group is an acryl group, an ethylene group, or a diazo group.

3. (Original) The metal nanoparticle of Claim 1, wherein the thiol compound is selected from the group consisting of cystamine(dihydrochloride), 6-mercapto-1-hexanol, 4,4'-thiobiphenol, 2-mercaptoethanol, 1-mercapto-2-propanol, 3-mercapto-1-propanol, 3-mercapto-2-butanol, 3-mercapto-1,2-propanediol, 2,3-dimercapto-1-propanol, dithiotheretol, dithioerythritol, 1,4-dithio-L-theretol, 3-(methylthio)-1-propanol, 4-(methylthio)-1-butanol, 3-(methylthio)-1-hexanol, 2,2'-thiodiethanol, 2-hydroxyethyl disulfide, 3,6-dithia-1,8-octanediol, 3,3'-thiodipropanol, 3-methylthio-1,2-propanediol, 3-ethylthio-1,2-propanediol, D-glucose diethyl mercaptal, 1,4-dithiane-2,5-diol, 1,5-dithiacyclooctan-3-ol, and 4-hydroxythiophenol; and

the isocyanide compound is selected from the group consisting of 4-aminobenzyl cyanide, 4-cyanophenol, and 4'-hydroxy-4-biphenylcarbonitrile.

4. (Currently Amended) A photosensitive composition for forming a pattern, comprising ~~the~~ a photosensitive metal nanoparticle ~~of claim 1~~, a photoinitiator, and an organic solvent

wherein the photosensitive metal nanoparticle is prepared by (i) forming a self-assembled monolayer of a thiol or isocyanide compound with a terminal reactive group, represented by Formula 1, on the surface of the metal nanoparticle, and then (ii) introducing a photosensitive group through a reaction with the terminal reactive group to the monolayer:

Formula 1

$X\text{-}R\text{-}(A)_a$

wherein X- is HS- or NC-; R is a polyvalent organic group of 2-50 carbon atoms; A is -OH, -COOH, -COCl or $-NH_2$; and a is an integer of 1-4.

5. (Original) The photosensitive composition of Claim 4, further comprising a conductive polymer and/or a non-conductive polymer.

6. (Original) The photosensitive composition of Claim 5, wherein the conductive polymer is selected from the group consisting of polyacetylene (PA), polythiophene (PT), poly(3-alkyl)thiophene (P3AT), polypyrrole (PPY), polyisothianapthelene (PITN), polyethylene dioxythiophene (PEDOT), polyparaphenylene vinylene (PPV), poly(2,5-dialkoxy)paraphenylenevinylene, polyparaphenylene (PPP), polyheptadiyne (PHT), poly(3-hexyl)thiophene (P3HT), polyaniline (PANI), and mixtures thereof.

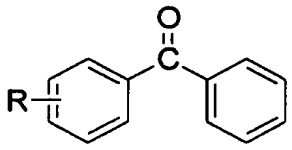
7. (Original) The photosensitive composition of Claim 5, wherein the non-conductive polymer is selected from the group consisting of polyester, polycarbonate, polyvinylalcohol, polyvinylbutyral, polyacetal, polyarylate, polyamide, polyamidimide, polyetherimide, polyphenylenether, polyphenylenesulfide, polyethersulfone, polyetherketone, polyphthalamide, polyethernitrile, polyethersulfone, polybenzimidazole, polycarbodiimide, polysiloxane,

polymethylmethacrylate, polymethacrylamide, nitrile rubbers, acryl rubbers, polyethylenetetrafluoride, epoxy resins, phenol resins, melamine resins, urea resins, polybutene, polypentene, ethylene-propylene copolymer, ethylene-butene-diene copolymer, polybutadiene, polyisoprene, ethylene-propylene-diene copolymer, butyl rubbers, polymethylpentene, polystyrene, styrene-butadiene copolymer, hydrogenated styrene-butadiene copolymer, hydrogenated polyisoprene, hydrogenated polybutadiene, and mixtures thereof.

8. (Original) The photosensitive composition of Claim 4, wherein the photoinitiator comprises acetophenone compounds; benzoin compounds; benzophenone compounds; thioxatone compounds; or 1-phenyl-1,2-propanedione-2-(O-ethoxycarbonyl)oxime), 2,4,6-trimethyl benzoyl diphenyl phosphine oxide, methyl phenyl glyoxylate, benzil, 9,10-phenanthraquione, camphorquinone, dibenzosuberone, 2-ethylanthraquinone, 4,4'-diethylisophthalophenone, or 3,3',4,4'-tetra(*t*- butylperoxycarbonyl)benzophenone.

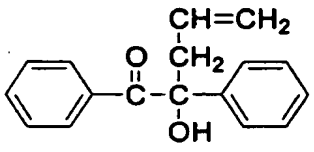
9. (Original) The photosensitive composition of Claim 4, wherein the photoinitiator is selected from the group consisting of compounds represented by the following Formulas 2, 3, 4 and 5:

Formula 2



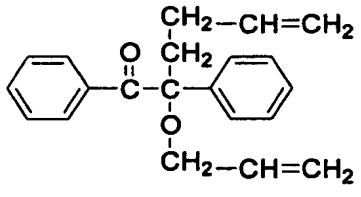
Wherein, R is an acryl group;

Formula 3



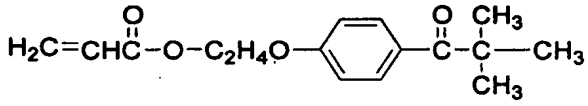
;

Formula 4



; and

Formula 5



10. (Original) The photosensitive composition of Claim 4, further comprising a co-initiator selected from the group consisting of triethanolamine, methyldiethanolamine, triisopropanol amine, 4,4'-dimethylamino benzophenone, 4,4'-diethylamino benzophenone, 2-dimethylamino ethylbenzoate, 4-dimethylamino ethylbenzoate, 2-n-butoxyethyl-4-dimethylaminobenzoate, 4-dimethylamino isoamylbenzoate, 4-dimethylamino-2-ethylhexyl benzoate, and Eosin Y.

11. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 4 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

12. (Original) The metal nanoparticle of Claim 2, wherein the thiol compound is selected from the group consisting of cystamine(dihydrochloride), 6-mercapto-1-hexanol, 4,4'-thiobiphenol, 2-mercaptoethanol, 1-mercapto-2-propanol, 3-mercapto-1-propanol, 3-mercapto-2-butanol, 3-mercapto-1,2-propanediol, 2,3-dimercapto-1-propanol, dithiotheretol, dithioerythritol, 1,4-dithio-L-theretol, 3-(methylthio)-1-propanol, 4-(methylthio)-1-butanol, 3-(methylthio)-1-hexanol, 2,2'-thiodiethanol, 2-hydroxyethyl disulfide, 3,6-dithia-1,8-octanediol, 3,3'-thiodipropanol, 3-methylthio-1,2-propanediol, 3-ethylthio-1,2-propanediol, D-glucose diethyl

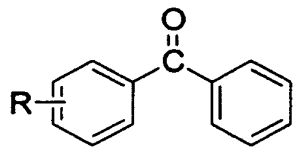
mercaptal, 1,4-dithiane-2,5-diol, 1,5-dithiacyclooctan-3-ol, and 4-hydroxythiophenol; and

the isocyanide compound is selected from the group consisting of 4-aminobenzyl cyanide, 4-cyanophenol, and 4'-hydroxy-4-biphenylcarbonitrile.

13. (Original) The photosensitive composition of Claim 5, wherein the photoinitiator comprises acetophenone compounds; benzoin compounds; benzophenone compounds; thioxatone compounds; or 1-phenyl-1,2-propanedione-2-(O-ethoxycarbonyl)oxime), 2,4,6-trimethyl benzoyl diphenyl phosphine oxide, methyl phenyl glyoxylate, benzil, 9,10-phenanthraquione, camphorquinone, dibenzosuberone, 2-ethylanthraquinone, 4,4'-diethylisophthalophenone, or 3,3',4,4'-tetra(*t*- butylperoxycarbonyl)benzophenone.

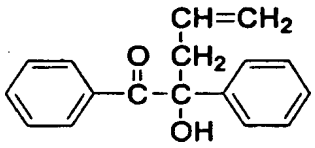
14. (Original) The photosensitive composition of Claim 5, wherein the photoinitiator is selected from the group consisting of compounds represented by the following Formulas 2, 3, 4 and 5:

Formula 2



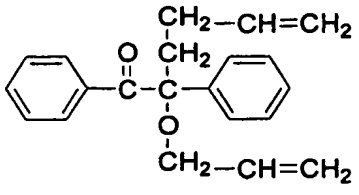
Wherein, R is an acryl group;

Formula 3



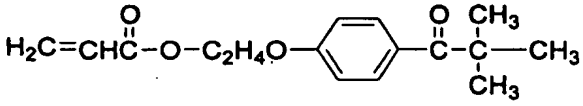
;

Formula 4



; and

Formula 5



15. (Original) The photosensitive composition of Claim 5, further comprising a co-initiator selected from the group consisting of triethanolamine, methyldiethanolamine, triisopropanol amine, 4,4'-dimethylamino benzophenone, 4,4'-diethylamino benzophenone, 2-dimethylamino ethylbenzoate, 4-dimethylamino ethylbenzoate, 2-n-butoxyethyl-4-dimethylaminobenzoate, 4-dimethylamino isoamylbenzoate, 4-dimethylamino-2-ethylhexyl benzoate, and Eosin Y.

16. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 5 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

17. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 6 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

18. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 7 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

19. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 8 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

20. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 9 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

21. (Original) A method of forming a conductive pattern, comprising:

(i) coating the photosensitive composition of claim 10 on a substrate, followed by a drying process; and

(ii) exposing the coating to light, followed by a developing process.

22. (Currently Amended) A photosensitive metal nanoparticle prepared by (i) forming a self-assembled monolayer of a thiol or isocyanide compound with a terminal reactive group, represented by Formula 1, on the surface of the metal nanoparticle, and then (ii) introducing a photosensitive group through ~~the~~ a reaction with the terminal reactive group to the monolayer:

Formula 1

X-R-$(A)_a$

Wherein X- is HS- or NC-; R is an at least divalent organic group of 2-50 carbon atoms; A is -OH, -COOH, -COCl or $-NH_2$; and a is an integer of 1-4.

23. (New) The metal nanoparticle of Claim 1, wherein, in step (ii), a reactive compound comprises the photosensitive group and a functional group and the functional group reacts with the terminal reactive group to the monolayer.

24. (New) The metal nanoparticle of Claim 22, wherein, in step (ii), a reactive compound comprises the photosensitive group and a functional group and the functional group reacts with the terminal reactive group to the monolayer.